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(54) Abstract Title

Well drilling method and system

(57) Methods and systems are provided for drilling a wellbore (60) through a subterranean formation using a drilling rig (25) and a drill string (50), whereby the bottom hole pressure while circulating drilling fluid ("ECD") may be substantially maintained when circulation is interrupted or altered, such as when adding a joint of drill pipe to or removing a joint of drill pipe from the drill string. The method includes controllably applying and maintaining a desired variable annulus fluid pressure in the wellbore, and thereafter controllably releasing the pressure from the wellbore (60). In addition, methods and systems are provided for rotating the drill string while trapping, maintaining and/or releasing the wellbore pressure. A substantially constant ECD pressure may be maintained on a formation, thereby facilitating the use of a lower density drilling fluid than may otherwise be required to maintain well control.

